

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1 and 8-17 are pending, with Claims 11 and 12 withdrawn from consideration. Claims 1, 8, and 15-17 are amended by the present amendment. No new matter is added.

Office Action Summary

Claims 1, 8, and 9 were rejected under 35 U.S.C. § 102(b) over U.S. Patent No. 6,041,617 to Sanada et al. (hereinafter “Sanada”); Claim 10 was rejected under 35 U.S.C. § 103(a) over Sanada; Claims 13 and 14 were rejected under 35 U.S.C. § 103(a) over Sanada in view of U.S. Patent No. 4,786,301 to Rhodes (hereinafter “Rhodes 301”); Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) over Sanada in view of U.S. Patent No. 4,995,235 to Halene (hereinafter “Halene”); Claims 1, 8-10, and 17 were rejected under 35 U.S.C. § 103(a) over U.S. Patent No. 4,700,550 to Rhodes (hereinafter “Rhodes 550”) in view of U.S. Patent No. 5,005,371 to Yonezawa et al. (hereinafter “Yonezawa”); Claims 13 and 14 were rejected under 35 U.S.C. § 103(a) over Rhodes 550 in view of Yonezawa, further in view of Rhodes 301; and Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) over Rhodes 550 in view of Yonezawa, further in view of Halene.

Interview Summary

First, Applicants wish to thank Examiner Cox and Supervisory Examiner Swann for the courtesy of a personal interview extended to Applicants’ representative on October 21, 2010, during which the outstanding rejections were discussed. Applicants’ representative presented proposed claim amendments to the independent claims. Examiner Cox indicated that the proposed amendments would appear to overcome the anticipation rejection over Sanada. In

addition, amendments of Claims 15 and 16 were discussed, and Examiner Cox indicated that reciting the switching of flow direction to regenerate saturated adsorbent heat exchangers would overcome the inclusion of Halene into the obviousness rejection of Claims 15 and 16. The amendments discussed during the interview, and others, are included in this amendment.

Rejection of Claims 1, 8, and 9 under 35 U.S.C. § 102(b) over Sanada

Applicants respectfully traverse the rejection of Claims 1, 8, and 9 under 35 U.S.C. § 102(b) over Sanada with respect to amended Claim 1.

Claim 1 is amended to recite, *inter alia*, direct heat exchange between water and an airstream. The Office Action asserted Sanada describes heat exchange between water and an airstream, but as was discussed during the interview, such heat exchange is at best indirect. Therefore, Sanada does not teach or suggest an air conditioning apparatus as recited in amended Claim 1. Accordingly, Applicants respectfully submit that Claim 1 (and all associated dependent claims) patentably defines over Sanada, and request that the rejection of Claims 1, 8, and 9 under 35 U.S.C. § 102(b) be withdrawn.

Rejections of Claims 10 and 13-16 under 35 U.S.C. § 103(a) over Sanada as primary reference

Applicants respectfully traverse the rejections of Claims 10 and 13-16 under 35 U.S.C. § 103(a) over Sanada as a primary reference. Applicants respectfully submit that none of the secondary references applied in combination with Sanada teaches or suggests direct heat exchange between water and an airstream, as recited in amended Claim 1. Accordingly, Claims 10 and 13-16 patentably define over any proper combination of the applied references at least by virtue of dependence from Claim 1. Therefore, Applicants respectfully request that the rejections of Claims 10 and 13-16 under 35 U.S.C. § 103(a) over Sanada as primary reference be withdrawn.

Rejection of Claims 1, 8-10, and 17 under 35 U.S.C. § 103(a) over Rhodes ‘550 as primary reference

Applicants respectfully traverse the rejection of Claims 1, 8-10, and 17 under 35 U.S.C. § 103(a) over Rhodes ‘550 in view of Yonezawa with respect to amended Claim 1.

Briefly summarizing, amended Claim 1 recites

an air conditioning apparatus controlling temperature and humidity of *an airstream supplied to an air-conditioned space*, comprising:

a cold and hot water circuit for the flow of cold and hot water, the cold and hot water circuit including

four heat exchangers for effecting heat exchange between the cold and hot water and *said airstream*, wherein two of the four heat exchangers are air heat exchangers which mainly perform air sensible heat processing, *at least one of the air heat exchangers effecting direct heat exchange between water in the water circuit and a first portion of said airstream* and the other two heat exchangers are *adsorption heat exchangers* which mainly perform air latent heat processing with an adsorbent supported on a surface thereof by *effecting direct heat exchange between water in the water circuit and a second portion of said airstream, the first portion of said airstream being distinct from the second portion of said airstream.*

a first switching mechanism for switching a direction of cold and hot water flow so that hot water flows through one of the adsorption heat exchangers while cold water flows through the other adsorption heat exchanger, and

a second switching mechanism for switching the direction of cold and hot water flow so that hot water flows through one of the air heat exchangers while cold water flows through the other air heat exchanger.

As emphasized above, Claim 1 is amended to recite that *an airstream is supplied to an air-conditioned space* and at least one of the air heat exchangers effects direct heat exchange between water in the water circuit and *a first portion of said airstream*, and adsorption heat exchangers effect direct heat exchange between water in the water circuit and *a second portion of said airstream, wherein the first portion of said airstream is distinct from the second portion of said airstream.*

Applicants respectfully submit that Rhodes ‘550 lacks at least the above-noted features of Claim 1. Specifically, the Office Action asserts that heat exchanger 82 corresponds to one of the

claimed air heat exchangers and that desiccant bed unit 12 corresponds to one of the adsorption heat exchangers. Rhodes '550 describes that "conventional heat exchanger 82 ... serves to preheat the desorbing exhaust air passing through the air passageways of desiccant bed unit 12." (Col. 16, ll. 53-55.) Therefore, the air must pass through heat exchanger 82 and desiccant bed unit 12.

In contrast, amended Claim 1 recites that air passing through the air heat exchanger (a first portion of said airstream) is distinct from (the first portion of said airstream is distinct from the second portion of said airstream) air passing through the adsorption heat exchangers (a second portion of said airstream). Therefore, amended Claim 1 (and all associated dependent claims) patentably defines over Rhodes '550.

Applicants respectfully submit that the secondary reference, Yonezawa, fails to cure the deficiencies of Rhodes '550 noted above. Indeed, the Office Action did not assert otherwise. Independent Claim 17 is amended to recite similar features of a first and second portion of an airstream. Accordingly, Applicants respectfully submit that Claims 1 and 17 (and all associated dependent claims) patentably define over any proper combination of the applied references, and request that the rejection of Claims 1, 8-10, and 17 under 35 U.S.C. § 103(a) be withdrawn.

Rejection of Claims 13-16 under 35 U.S.C. § 103(a) over Rhodes '550 as primary reference

Applicants respectfully traverse the rejection of Claims 13-16 under 35 U.S.C. § 103(a) over Rhodes '550 as primary reference, and submit that the secondary references (Rhodes '301 and Halene) fail to cure the deficiencies of Rhodes '550 noted regarding Claim 1. Accordingly, Claims 13-16 patentably define over any proper combination of the applied references at least by virtue of dependence from Claim 1.

In addition, Claims 15 and 16 are amended as discussed during the interview, to overcome the inclusion of Halene into the combination of the references.

Accordingly, Applicants respectfully request that the rejections of Claims 13-16 under 35 U.S.C. § 103(a) over Rhodes '550 as primary reference be withdrawn.

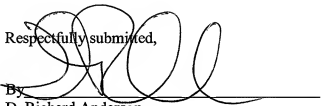
Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact George S. Dolina, Registration No. 63,654 at the telephone number of the undersigned below to conduct an interview in an effort to expedite prosecution in connection with the present application.

If necessary, the Director is hereby authorized to charge any fees required during the pendency of the above-identified application or credit any overpayment to Deposit Account No. 02-2448.

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Respectfully submitted,


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